Including Missing Lakes In Our Model

A flexible catchment-based lake and river routing product for hydrologic and land surface models in Canada

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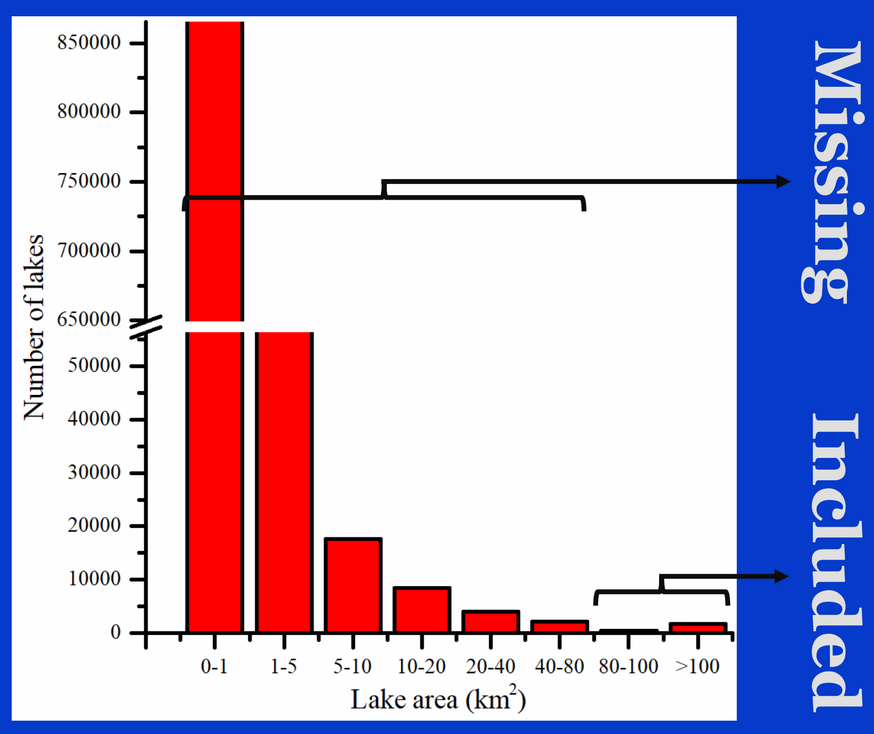
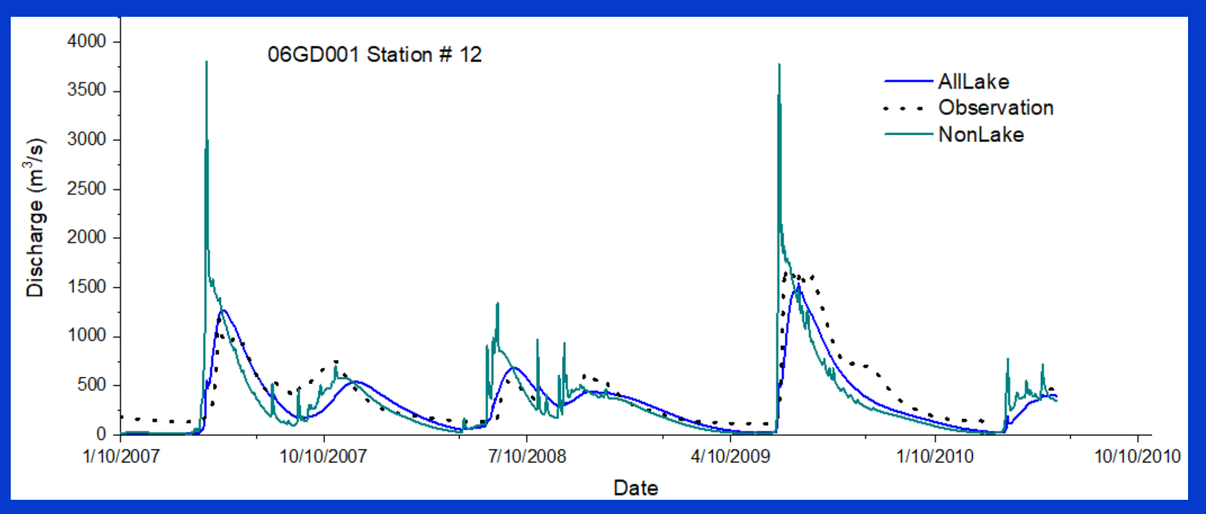
Missing lakes

Missing lakes in our model



- In most large scale hydrology study, only lake with a lake area > 80 km² was included in model.

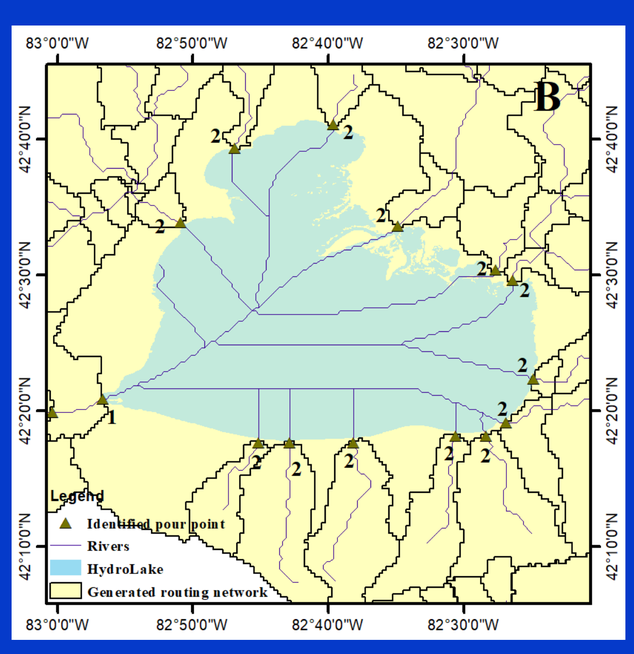
Function of lakes



- Lakes could retain snow melt and precipitation in spring and summer, and supply water to river in winter and autumn
- Have significant impact on streamflow prediction

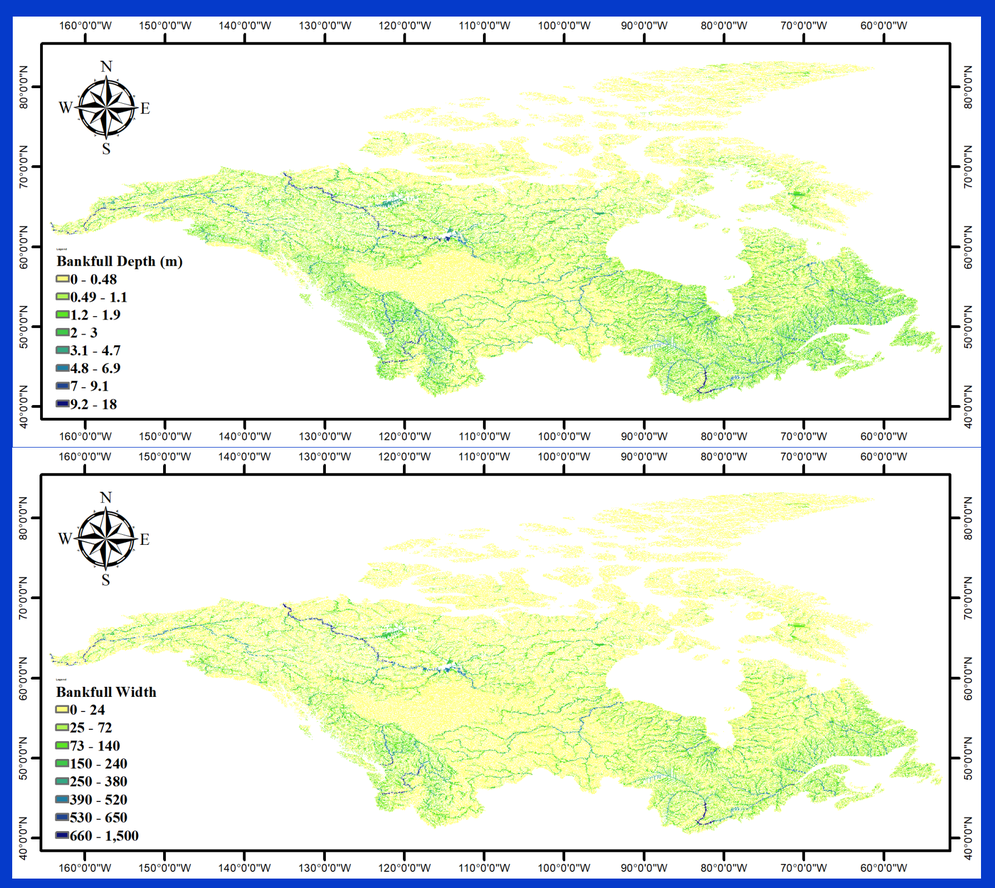
What's in this product

Routing structure with lakes



- A lake catchment for each lake by connected by river network was generated
- Total 30324 lake was included in HydroSHEDS with lakes product
- Raven inputs for each of products was prepared

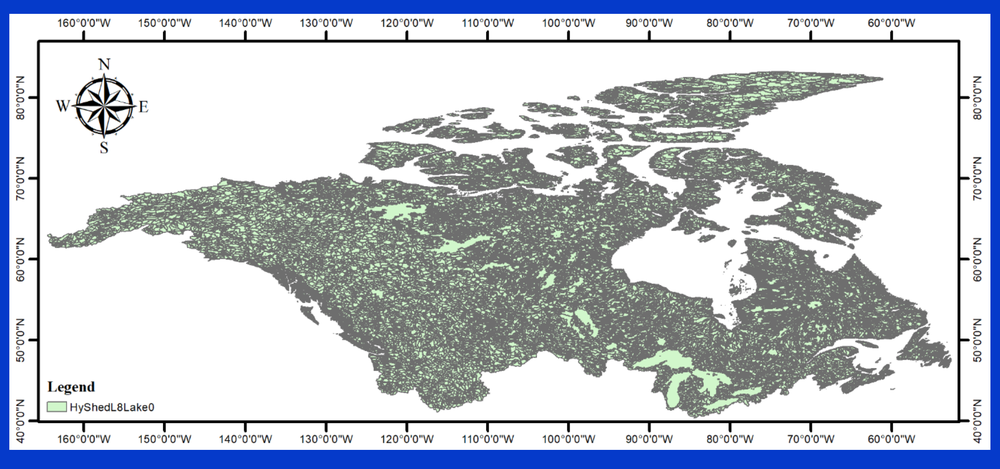
Routing parameters



- Flood plain manning's n for each catchment based on land use type
- All product are provided in shp format

Usage

One of the developed product



- **Coupling with land surface model**

Land surface model

Routing Product

Raven Routing model

Streamflow simulation

- **Used as inputs for various hydrological models: such as SWAT, HYPE, RAVEN.**

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